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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/924,795	08/08/2001	Carl Robert Posthuma	30	2806
7590	12/21/2004		EXAMINER	
Werner Ulrich 434 Maple Street Glen Ellyn, IL 60137-3826			LUGO, DAVID B	
			ART UNIT	PAPER NUMBER
			2637	

DATE MAILED: 12/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/924,795	POSTHUMA, CARL ROBERT
	<b>Examiner</b>	<b>Art Unit</b>
	David B. Lugo	2637

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 08 August 2001.

2a)  This action is **FINAL**.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)  Claim(s) 1-6 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5)  Claim(s) \_\_\_\_\_ is/are allowed.  
6)  Claim(s) 1-6 is/are rejected.  
7)  Claim(s) \_\_\_\_\_ is/are objected to.  
8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on 11 September 2001 is/are: a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a))

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 1/30/03.

4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5)  Notice of Informal Patent Application (PTO-152)  
6)  Other: \_\_\_\_\_

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to because in Fig. 2B, when the binder cross-talk is **greater than** the binder limit, the process proceeds from box 215 to box 221, which is contrary to the description, which states in page 6, last paragraph, that the process proceeds to box 221 when the binder cross-talk is **less than** the binder limit, not greater than the binder limit. Similarly, when the binder cross-talk is **less than** the binder limit, the process proceeds from box 215 to box 241, which is contrary to the description, which states in page 7, last paragraph, that the process proceeds to box 241 if the result of test 215 indicates that the binder cross-talk limit has been **exceeded**. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

2. The abstract of the disclosure is objected to because in line 8, "Avantageously" should be --Advantageously--. Correction is required. See MPEP § 608.01(b).

***Claim Objections***

3. Claims 1-6 are objected to because of the following informalities:
  - a. Claim 1 recites the limitation "said Digital Subscriber Lines (DSLs)" in line 3. There is insufficient antecedent basis for this limitation in the claim, because only a single Digital Subscriber Line is previously recited, not a plurality of DSLs.
  - b. Claim 6, line 1, "are programmed" should be --is programmed--. Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
5. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen U.S. Patent 5,970,088 in view of Sadjadpour et al. U.S. Patent 6,393,052.
6. Regarding claim 1, Chen discloses a system comprising a central office modem pool communicating with a plurality of subscriber modems, where a subscriber-end modem, considered to comprise a controller having means for requesting a bit-rate for a DSL controlled by said controller, sends its rate capabilities and its preference to the central office end during a rate negotiation (col. 13, lines 10-11). The central office end comprises processor means for

storing and analyzing bit rates (DSPs 260 - Fig. 2c), and responds with its capabilities and rate selection, where the rate choice depends on line condition and traffic load (col. 13, lines 12-21).

Chen further states that the rate negotiation provides time-varying adaptation in order to maintain the highest possible throughput as line conditions or network accessibility changes (col. 15, lines 25-28). The processor means of Chen is considered capable of performing the functional limitations of being detecting if bit-rates for all DSLs in a binder group correspond to an unacceptable level of cross-talk, and responsive to detection of an unacceptable level of cross-talk, reducing the allowable bit-rate of one or more active DSLs of the binder group to lower the cross-talk level since it is a processor capable of executing computer instructions.

7. Chen, although implementing NEXT cancellation filters and considered capable of performing the claimed functions, does not expressly disclose detecting if the bit-rates for all DSLs in a binder group correspond to an unacceptable level of cross-talk.

8. Sadjadpour et al. disclose a method for minimizing near end cross talk (NEXT) where the NEXT is minimized while the data rate is optimized (function block 61 - col. 8, lines 19-21).

9. It would have been obvious to one of ordinary skill in the art to use the technique of Sadjadpour et al. in the system of Chen in order to improve data throughput and optimize bit allocation.

10. Regarding claim 2, the apparatus of Chen is considered to be capable of detecting if bit-rates for all DSLs in a binder group correspond to an unacceptable level of cross-talk wherein said unacceptable level is below an upper limit wherein an additional line can become active without exceeding said upper limit.

11. Regarding claim 3, the apparatus of Chen is considered to be capable of reducing the allowable bit-rate of one or more DSLs of the binder group if bit-rates of all DSLs are above the unacceptable level.

12. Regarding claim 4, the apparatus of Chen is considered to be capable of increasing the allowable bit-rate of one or more DSLs to raise the bit-rate for all DSLs in the binder group if the allowable bit-rate of an active DSL is reduced so that the processor means detect bit rates for all DSLs in the binder group to be a value less than the unacceptable limit.

13. Regarding claim 5, the apparatus of Chen is considered to be capable of adjusting the level upward if surrounding binder groups have a level of cross-talk substantially less than an unacceptable level for the surrounding binder groups.

14. Regarding claim 6, the apparatus of Chen is considered to be capable of being programmed to perform the detection step at intervals sufficiently frequent to minimize the probability of exceeding an allowable error rate.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David B. Lugo whose telephone number is 571-272-3043. The examiner can normally be reached on M-F; 9:30-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

dl  
12/1/04

  
Khai Tran  
PRIMARY EXAMINER